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TO: File

FROM: Elizabeth Erickson
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DATE: December 19, 2004

SUBJECT: OPTIONS CONSIDERED FOR REVISION OF INTERIM WASTE LOAD ALLOCATION IN THE TOTAL MAXIMUM DAILY LOAD FOR CHLORIDE IN THE UPPER SANTA CLARA RIVER

The Regional Board adopted a chloride TMDL for the Upper Santa Clara River (Resolution No.03-008 on July 10, 2003). The Regional Board's goal in modifying the interim waste load allocation in the TMDL is to revise the values to equal those in the NPDES permits approved for Saugus and Valencia Water Reclamation Plants in the TMDL reaches on November, 2003 and after the TMDL had been approved.

Background

Many segments of the Upper Santa Clara River contain elevated levels of chloride that exceed the water quality objectives (WQOs) and may not protect all beneficial uses. Impaired segments (i.e. reaches) of the Upper Santa Clara River were included on the 1998 and 2002 California 303(d) list of impaired waterbodies.

At a public hearing on July 10, 2003, the Regional Board considered amending the Basin Plan to include a TMDL for chloride in the Upper Santa Clara River. The TMDL included interim waste load allocations based on a statistical assessment of three years of data collected before October 2002. At the public hearing, representatives from the County Sanitation Districts of Los Angeles County, owners and operators of the Saugus and Valencia WRPs, requested that the Regional Board consider different interim effluent waste load allocations than those proposed by the Regional Board staff. The discharger proposed a more recent data set be used to revise the interim waste load allocations.

The Chloride TMDL, Resolution No. 03-008, was adopted by the Regional Board on that date, July 10, 2003. The resolution assigned interim waste load allocations and waste load allocations (WLAs) to major POTWs discharging to specified reaches of the Upper Santa Clara River. The Regional Board also directed staff to review the interim effluent waste load allocations.

The discharge concentrations have been shown to be dependent on chloride concentrations entering the watershed in imported water, especially during droughts. An interim waste load allocation is proposed which will be based on the concentration of the external water supply plus a loading factor of 134 mg/L at the Valencia and 114 mg/L at the Saugus, the highest loading

value measured at these locations in the last 5 years measured as a twelve month rolling average. As an example, the highest chloride concentration measured recently for imported water at the Castaic Lake discharge was 95 mg/L in February 2003. This water quality would have resulted in interim waste load allocations of 219 and 209 mg/L at Valencia and Saugus.

Table 1. Interim Effluent Waste load allocations for Chloride listed in the Resolution 03-008

POTWs	Daily Maximum Interim Effluent Waste load allocations (mg/l)	Monthly Average Interim Effluent Waste load allocations (mg/l)
Saugus WRP	218	200
Valencia WRP	196	187

Table 2: Proposed Interim Effluent Waste load allocations for Chloride at Saugus and Valencia WRPs February 2003

POTWs	Daily Maximum Interim Effluent Waste load allocations (mg/l)	Monthly Average Interim Effluent Waste load allocations (mg/l)
Saugus WRP	230	209
Valencia WRP	230	215

Discussion

The Regional Board gave direction, upon its approval of the TMDL, that a revision of the interim waste load allocations include a discussion of the impact of that action on avocado and, especially, on groundwater. These discussions conclude that the change in the interim waste load allocation has a minimal additional impact on the loading, groundwater concentrations and avocado production. Further, the TMDL plan contains a remedy for impacts to avocado that may result from surface or groundwater degradation during the TMDL implementation. The implementation plan gives the grower procedures and assistance to receive alternate water or financial recompense for damages from the discharger.

Impact on Groundwater

The first three years of the chloride TMDL implementation plan includes a hydrological study of the surface and groundwater of the Upper Santa Clara River. It is expected that this study will allow evaluation of the future effects of interim waste load allocations, as well as the final effluent discharge concentrations. This information can be used to revise interim waste load allocations, if necessary and possible, or quantify the specific impact.

The change in the chloride interim waste load allocation will increase the loading to the Santa Clara River during the current year by about 5000 lbs/day over that expected from the previous

interim waste load allocations. This is 14% of the estimated 37,000 lbs/day currently added by the effluent.

Table 3: Chloride Load from Waste Discharge to current end of TMDL implementation

Year	Source of Load	Interim Waste load allocation mg/L	MG/day	Lbs/day chloride
2003	WRP	187	30	32,000
2003	WRP	215	30	37,000

Impact on Avocado

An estimation of the impact on avocado requires an estimation of the change in the in-stream concentrations below Los Angeles County and the effect of a particular concentration on avocado production. While a mass balance estimate can provide estimates on concentration, these numbers remain highly controversial and the concentration changes estimated are too small to allow reliable calculation of a change of effect on avocado production.

However, some avocado are irrigated with water diverted near the Ventura/ Los Angeles County Line and these crops will receive the largest impact should there be a change in the groundwater concentration or increase in the interim waste load allocation. Under the worst conditions, the highest chloride concentrations at the first discharge point could be equal to the highest interim effluent concentration which was originally 187 mg/L and would be increased to 215 mg/L. Both these values are above the 180 mg/l shown by agricultural research[1] to result in loss of production with minimal difference between the two values.

[1] Referenced in Resolution 03-008